

Mid Year Assessment Review Sheet

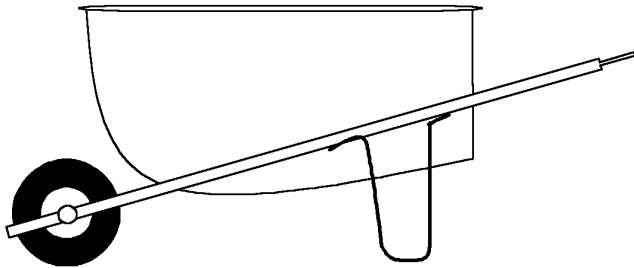
1. The energy of motion is known as

- A) thermal energy. B) potential energy.
C) kinetic energy. D) magnetic energy.

2. Heat flows between two objects that are close to each other if the objects have different

- A) densities B) temperatures
C) specific heats D) masses

3. Base your answer to the following question on the drawing of a wheel barrel below.



What two simple machines does the wheel barrow use?

- A) A pulley and a screw
B) An inclined plane and a wheel and axle
C) A lever and a wheel and axle
D) A wedge and a pulley

4. A *fathom* is a measurement of length used to measure how deep water is. This chart shows the relationship between feet and fathoms.

Fathoms Compared to Feet

Fathoms	1	2	3	4	5	6
Feet	6	12				36

How many feet are there in 4 fathoms?

- A) 60 feet B) 24 feet C) 6 feet D) 12 feet

5. A student observes that an organism is green. A valid conclusion that can be drawn from this observation is that

- A) the organism cannot be single celled
B) not enough information is given to determine whether the organism is a plant or an animal
C) the organism must be a plant
D) the organism must be an animal

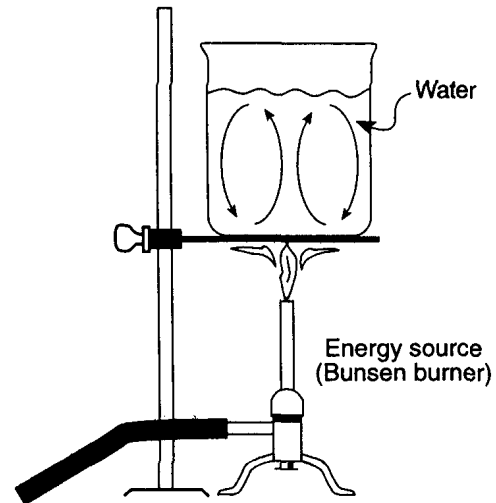
6. Which change absorbs energy?

- A) steam → water B) steam → ice
C) ice → water D) water → ice

7. When you hold an ice cube, your hand feels cold because

- A) the cold flows from the ice cube to your hand
B) your hand is a better conductor of heat than the ice cube
C) ice is a poor conductor of heat
D) heat flows from your hand to the ice cube

8. The diagram below shows the heating of water.



The main method of heat transfer occurring within the water is called

- A) insolation B) conduction
C) radiation D) convection

9. Which change occurs at the point when a liquid becomes a solid?

- A) Energy is released.
B) The temperature decreases.
C) Energy is absorbed.
D) The temperature increases.

10. Which of the following is an example of electrical energy?

- A) a piece of cake being cut
B) a lightbulb being turned on
C) a violin being plucked
D) a bike rolling down a hill

11. Which statement about a rock sample is **most** likely an inference?

- A) The rock has flat sides and sharp corners.
B) The rock has thin, distinct layers.
C) The rock is made of small, dark-colored crystals.
D) The rock has changed color due to weathering.

12. When a battery is in use, stored energy is changed to

- A) light energy B) electrical energy
C) mechanical energy D) heat energy

13. "Stored" energy is known as

- A) potential energy. B) nuclear energy.
C) kinetic energy. D) mechanical energy.

14. A student classifies several objects. The classification system should be based on

- A) observations B) hypotheses
C) inferences D) interpretations

15. What kind of energy is stored in natural gas?

- A) heat B) chemical
C) nuclear D) mechanical

16. Luann inflates a balloon to a volume of 2000 cubic centimeters (cm³). Every hour, she puts the balloon into a room with a different air temperature. At the end of each hour, Luann measures the balloon's volume in that room. Luann records her information in the table below.

VOLUME OF A BALLOON IN DIFFERENT TEMPERATURES

Room	A	B	C	D
Temperature of air in room	20°C	25°C	30°C	35°C
Volume of balloon	2020 cm ³		2060 cm ³	2080 cm ³

What is the volume of the balloon in Room B?

- A) 2050 cm³ B) 2000 cm³ C) 2030 cm³ D) 2040 cm³

17. The chart below shows the number of lunches ordered on each day for one week at Wilson Elementary school.

SCHOOL LUNCHES ORDERED AT WILSON ELEMENTARY SCHOOL

Day of the Week	Number of Lunches Ordered
Monday	75
Tuesday	25
Wednesday	50
Thursday	100
Friday	150

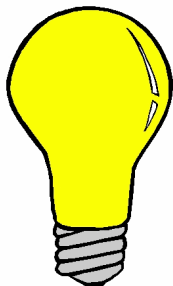
What is the total number of school lunches ordered during the week?

- A) 150 B) 300 C) 400 D) 250

18. Which of the following energy transformations occurs when a hamster wheel is used to power a radio?

- A) electrical to radiant
B) heat to mechanical
C) friction to electrical
D) mechanical to electrical

19.



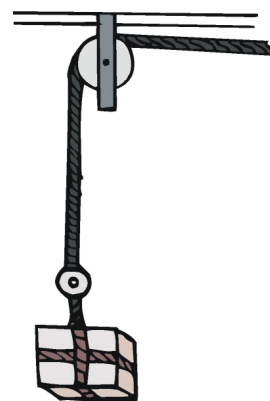
Which form of energy does this object produce?

- A) mechanical B) chemical
C) nuclear D) electrical

20. The boiling point of water is

- A) 0° Celsius B) 100° Celsius
C) 212° Celsius D) None of the above

21.



What simple machine does this device use?

- A) lever B) wedge
C) inclined plane D) pulley

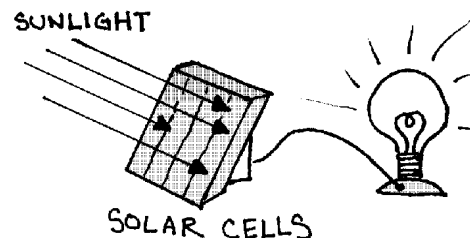
22. The freezing point of water is

- A) 100° Celsius B) 32° Celsius
C) 0° Celsius D) 212° Celsius

23. What basic form of energy is present in a lightning bolt?

- A) nuclear B) electrical
C) chemical D) mechanical

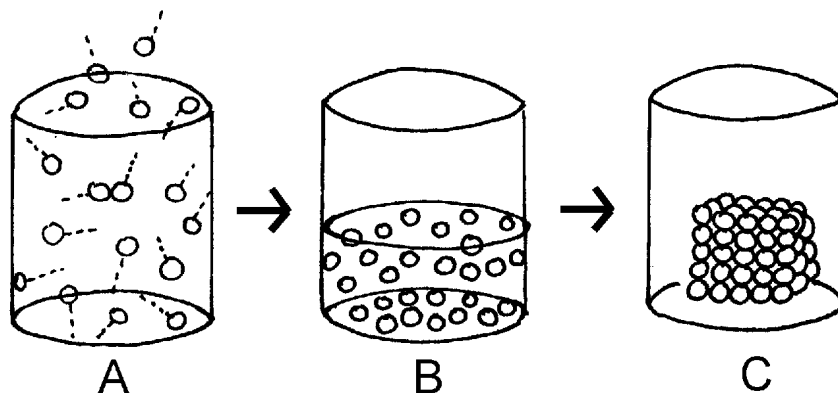
24. Solar cells can capture energy from our Sun and transfer this energy for many practical purposes.



List in the correct order the energy exchanges shown by the diagram above.

- A) Light → Electrical → Mechanical
B) Light → Mechanical → Light
C) Electrical → Mechanical → Light
D) Light → Electrical → Light

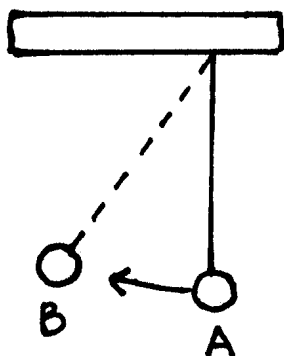
25. The diagram below shows a series of phase changes.



Which of the following happens as the phase changes from *A* to *B* to *C*?

- A) The molecules lose energy. B) The molecules gain energy.
C) The molecules move further apart. D) The molecules move faster.

26. The diagram below shows an object moved from position *A* to position *B* by a student.



At position *B*, the object has increased

- A) density B) weight
C) potential energy D) shape

27. Sublimation means a substance changes directly from a

- A) liquid to a solid B) solid to a gas
C) solid to a liquid D) gas to a liquid

28. A student is asked to classify rocks. For best results, the classification should be based on

- A) inferences B) interpretations
C) hypotheses D) observations

29. A prediction of next winter's weather based upon this winter is

- A) an observation B) a measurement
C) an inference D) a classification

30. In a battery, the energy is usually stored in the form of

- A) nuclear energy. B) mechanical energy.
C) heat energy. D) chemical energy.

31. As an object falls, it loses potential energy and gains what kind of energy?

- A) thermal B) kinetic
C) mechanical D) chemical

32.

Growth Time	
Temperature (Celsius)	Days to Reach 5cm Height
25°C	4
20°C	6
15°C	8
10°C	?
5°C	12

The table above shows how long it takes this plant to grow 5 cm. Observing this trend, how many days will it take for plant to grow 5 cm at 10 °C?

- A) 14 days B) 8 days C) 4 days D) 10 days

33. Water loses energy when it changes phase from

- A) liquid to solid B) liquid to gas
C) solid to liquid D) solid to gas

34. The boiling point of a substance is defined as the temperature at which

- A) the gas phase can be completely changed to liquid
B) the kinetic energy of the molecules begins to increase
C) the molecules of the substance break apart
D) a substance changes from liquid to a gas

35. Brenda left a glass of water outside in the sun. When she returned several hours later, she noticed the water was warmer. Which of the following explains why the water was warmer when she returned?

- A) The Sun's energy was refracted in the water.
B) The Sun's energy changed the chemical make-up of the water.
C) The Sun's energy evaporated some of the water.
D) The Sun's energy was absorbed by the water.

36. Amy grows tomato plants around her house. The tomato plants close to the front of her house bloomed more than those in the back of her house. Which can be an accurate statement regarding the tomato plants?

- A) The plants in the front of the house received less water than those in the back.
- B) The tomato plants were taller in the back of the house.
- C) The tomato plants had less blooms and fruit in the front of the house than those in the back.
- D) The plants in the front of her house received more sunlight than those in the back.

37. In the summer, Beth hangs her towels outside on a clothesline to keep dry. Which of the following would make the towels dry slower?

- A) rain
- B) clouds
- C) sunlight
- D) wind

38. Which two temperatures are identical for the same substance?

- A) melting point, boiling point
- B) freezing point, boiling point
- C) melting point, freezing point
- D) freezing point, condensation point

39. What occurs when a substance melts?

- A) It changes from liquid to solid, and heat is absorbed.
- B) It changes from solid to liquid, and heat is absorbed.
- C) It changes from liquid to solid, and heat is released.
- D) It changes from solid to liquid, and heat is released.

40. Which diagram best represents the convection in a container of water when the bottom of the container is heated?

